

## **ENGINEERING AIDE I**

### **DEFINITION:**

Under close or general supervision, depending upon the nature of the assignment, performs sub-professional engineering related to technical support duties; performs related work as required.

### **CLASS CHARACTERISTICS:**

Engineering Aide I is the entry level class of this job series. Initially under close supervision, incumbents perform varying work, depending upon the immediate needs of the City. They perform field work with a survey crew, take traffic surveys, provide basic drafting and computation support in the office, or act as a public works inspector.

### **IMPORTANT AND ESSENTIAL JOB FUNCTIONS:**

1. Assist professional engineering staff and technical personnel in a variety of survey, drafting, research and operational activities.
2. Post information to maps or drawings and make simple sketches or layouts.
3. Answer questions from the public at a counter or on the telephone.
4. Make calculations in the field or office, using a calculator.
5. Prepare charts and/or graphs for reports or presentations.
6. Maintain records and prepare reports following an established format.
7. Perform varied general support tasks such as making copies of drawings, filing and retrieving materials.
8. Distribute maps, specifications and other documents.
9. Perform a variety of engineering-technical duties in a practical setting.
10. Prepare original drawings utilizing computer aided drafting (CAD) programs.

### **MARGINAL/PERIPHERAL JOB FUNCTIONS:**

1. Work on a survey party performing rod and chain tasks, recording measurements, driving stakes and clearing brush.

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### **MARGINAL/PERIPHERAL JOB FUNCTIONS (Continued):**

2. Assist with traffic engineering surveys by setting counters and taking manual counts.
3. May assist professional engineering staff and technical personnel in inspection activities.
4. Conduct soil compaction tests using a nuclear density gauge.
5. Perform related work as required.

### **QUALIFICATIONS:**

#### **Knowledge of:**

1. Basic engineering terminology, principles and practices.
2. Basic surveying terminology, principles, and practices.
3. Basic drafting terminology, principles and practices to include computer aided design.
4. Basic computer skills.
5. Mathematics including algebra, geometry and trigonometry.

#### **Skill in:**

1. Making accurate engineering-related calculations.
2. Keeping accurate and concise notes and records.
3. Preparing reports following an established format.

#### **Ability to:**

1. Post information to and prepare maps and drawings.
2. Understand and follow oral and written directions.
3. Establish and maintain effective working relationships with those contacted in the course of the work.
4. Quickly learn the policies and procedures pertaining to the work.

## **Engineering Aide I**

### **JOB REQUIREMENTS:**

1. Possession of a valid California Class C driver's license in compliance with adopted City driving standards.
2. Must be willing to work out of doors in various weather conditions.
3. Must possess sufficient strength to carry forty pounds of equipment and walk over rough terrain.

### **OTHER QUALIFICATIONS:**

1. Completion of high school or its equivalent supplemented by course work in mechanical drawing or drafting, computer aided design, and mathematics through trigonometry.
2. Related work experience desired, but not required.

### **MACHINES/TOOLS/EQUIPMENT UTILIZED**

1. Automobile
2. Reports, forms, pencils and pens
3. Maps, plans, and blueprints
4. Computer monitor, keyboard and printer
5. Copy machines
6. Fax machine
7. Nuclear density gauge
8. Blue line machine
9. Calculator
10. Telephone

### **PHYSICAL DEMANDS:**

1. Mobility
2. Speaking/Hearing
3. Driving
4. Seeing
5. Sitting
6. Manual dexterity
7. Lifting and carrying up to 40 lbs.

## Engineering Aide I

### ENVIRONMENTAL AND ATMOSPHERIC CONDITIONS:

#### Office Conditions:

1. Indoors: normal office conditions, 60% of the time  
Travel: varying conditions, 40% of the time
2. Noise level: conducive to office setting
3. Lighting: conducive to office setting
4. Flooring: low level carpeting
5. Ventilation: provided by central air conditioning
6. Dust: normal, indoor levels

#### Field Conditions:

1. Outdoors: varying weather conditions
2. Noise level: varying low to high equipment noise
3. Flooring: grass, dirt, rock, asphalt, etc.
4. Dust: normal outdoor, to high outdoor levels